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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 09/292,056 | 04/14/1999 | JOEL S. GREENBERGER | PITT-IDIV | 3040 |
| 7590 06/27/2008 | | | | |
| ANSEL M SCHWARTZ ONE STERLING PLAZA 201 N CRAIG STREET SUITE 304 PITTSBURGH, PA 15213 | | | | |
| EXAMINER | | | | |
| BEISNER, WILLIAM H | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/292,056

Applicant(s)

GREENBERGER ET AL.

Examiner

WILLIAM H. BEISNER

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 47-64, 70, 74-81, 86-97, 99, 100, 103, 104 and 114-127 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 47-64, 70, 74-81, 86-97, 99, 100, 103, 104 and 114-127 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

1. This action is supplemental to the office action dated 9/20/2007 and responsive to the decision on the PETITION UNDER RULE 1.181 to rescind the restriction requirement issued by the Examiner in the office action dated April 3, 2007 and placed in the final status by the Examiner in the action dated September 20, 2007.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 47-50 and 52-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 47-50 and 52-56, "the imaging means" lacks antecedent basis. It appears that these claims should depend from claim 124 rather than claim 125.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 47-64, 70, 74-81, 86-97, 99, 100, 103, 104 and 124-127 are rejected under 35 U.S.C. 102(b) as being anticipated by Funakubo et al.(US 5,106,584).

With respect to claim 114, the reference of Funakubo et al. discloses an apparatus that includes a biochamber (tray, 6) having a plurality of cell housing containers (wells) and sealed in a housing (See column 7, lines 38-41). The apparatus includes a liquid handling system (4) that is capable of providing exchange of media to the cells and is in fluid communication with the plurality of cell housing containers (wells). The apparatus includes an image recognition system (24) that is capable of analyzing and/or recognizing the cells in the plurality of cell housing containers. The colony observation section of the reference of Funakubo et al. includes a microscope-equipped TV camera and computer (controller, 25) (See column 8, lines 43-53). The apparatus also includes a stage (7,8) for supporting the biochamber (6) and wherein the liquid handling system (4) and image recognition system (24) are provided in movable registration with respect to one another whereby the liquid handling system and image recognition system can access different cell housing containers (wells). Finally, the apparatus includes a system controller (25, 26) that is capable of regulating interaction between the biochamber (6), liquid handling system (4), image recognition system (24) and stage (7,8).

With respect to claim 115, the reference of Funakubo et al. discloses that the image recognition system includes a microscope-equipped TV camera (See column 8, line 44).

With respect to claim 116, the image recognition system is capable of determining cellular characteristics of the cells (See column 8, lines 49-53).

With respect to claim 117, the system controller is capable of actuating the liquid handling system to provide media exchange with the cells (See column 7, lines 15-56).

With respect to claim 118, the liquid handling system is capable of aspirating, irrigating and dispensing media to the cells (See column 7, lines 42-56).

With respect to claim 119, the liquid handling system includes a plurality of pipettes (21).

With respect to claim 120, the stage (7,8) is capable of displacing at least one of the housing containers (wells) with respect to the liquid handling system and image recognition system.

With respect to claim 121, the image recognition system is capable of determining cellular characteristics and the system controller is capable of regulating the biochamber and liquid handling system in response (See column 7, lines 15-56, and column 8, lines 43-53).

With respect to claim 122, the biochamber is capable of being displaceable to both the liquid handling system (4) and image recognition system (24).

With respect to claim 123, the biochamber can be moved in the X and Y directions (See stage (7,8)) and the liquid handling system (4) (See Figure 4) and image recognition system (24) (Microscope focus) can be moved in the Z direction.

With respect to the means for automatically determining recited in claims 1, 47-57, 62, 63, 71, 74, 75, 79, 80, 95, 97, 100 and 109, the computer, imaging device, camera and microscope of the reference of Funakubo et al. are structurally capable of providing the functions required of the above claims. Note, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See applicant's remarks dated

9/25/2006, page 3, regarding the corresponding structure to the recited mean-plus-function language.

With respect to claim 94, 96, 102 and 124, the image recognition system is capable of determining cellular characteristics of the cells (See column 8, lines 49-53). Note, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See applicant's remarks dated 9/25/2006, page 3, regarding the corresponding structure to the recited mean-plus-function language.

With respect to claims 58, 77, 78 and 125-127, the reference of Funakubo et al. discloses an apparatus that includes a biochamber (tray, 6) having a plurality of cell housing containers (wells) and sealed in a housing (See column 7, lines 38-41).

With respect to claims 81, 86-93 and 99, the liquid handling system is capable of aspirating, irrigating and dispensing media to the cells (See column 7, lines 42-56).the liquid handling system includes a plurality of pipettes (21).

With respect to claims 59-61, 64, 71 and 74-76, the apparatus includes a system controller (25, 26) that is capable of regulating interaction between the biochamber (6), liquid handling system (4), image recognition system (24) and stage (7,8). Note, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

See applicant's remarks dated 9/25/2006, page 3, regarding the corresponding structure to the recited mean-plus-function language.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 47-64, 70, 74-81, 86-97, 99, 100, 103, 104 and 114-127 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 47, 49-51, 57, 59, 63, 64 and 66 of copending Application No. 10/114,892 in view of Funakubo et al.(US 5,106,584)

Claims 47, 49-51, 57, 59, 63, 64 and 66 of U.S. Application 10/114,892 are substantially the same as claims 1, 47-64, 70, 74-81, 86-97, 99, 100, 103, 104 and 114-127 of the instant application. Any of the slight differences in structure between the two sets of claims are rendered obvious to one of ordinary skill in the art in view of the disclosure of Funakubo et al.

which discloses conventional structures for automating a culture process that includes image analysis.

8. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

9. Applicant's arguments filed 1/18/2007 with respect to claims 1, 47-64, 70, 74-81, 86-97, 99, 100, 103, 104 and 114-127 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM H. BEISNER whose telephone number is (571)272-1269. The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:15am to 3:45pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys J. Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/William H. Beisner/
Primary Examiner
Art Unit 1797**

WHB